CSE 250: Data Structures
FALL 2015

Contact Information

Instructor: Jesse Hartloff
Email: hartloff@buffalo.edu
Office: Davis 344
Office Hours:
    Tuesday 2-3
    Thursday 2-3

Lectures

MWF 3:00 - 3:50pm, Davis 101

Course Description

Catalog Description:

References

There is no required textbook for this course. Links to online tutorials and references will be provided where appropriate. Below are some suggestions if you prefer books.

Course textbook:
- Data Structures and Algorithms in C++
- Objects, Abstraction, Data Structures and Design: Using C++

C++ references:
- C++ Primer Plus
- C++ Primer
- The C++ Programming Language
Grading

- Homework (70%)
- Exams (30%)

Grade cutoffs:

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<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90%</td>
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<tr>
<td>A-</td>
<td>87%</td>
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<tr>
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<td>83%</td>
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<td>B</td>
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<td>B-</td>
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<td>C+</td>
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<td>F</td>
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Homework and Exam Notes

- All homework will be submitted electronically.
- No late homework will be accepted. If a submission is late, it will be assigned a score of 0.
- No makeup exams will be given except in provably extreme circumstances.

Homework

*Programming skills are best developed through experience.*

There will be a substantial amount of homework in this course that will comprise 70% of your final grade in the form of 9 equally weighted assignments. Each homework will be due in 3 parts:

- Part 1 due Wednesday before 11:59pm (20%): Debug sample code that contains errors.
- Part 2 due Thursday before 11:59pm (40%): Write code to accomplish a task.
- Part 3 due Friday before 11:59pm (40%): Write efficient code that accomplishes a more complicated task within a specified time bound.

Each homework will test your ability to apply the concepts of the previous week of lectures. You are strongly encouraged to work on the homework the week before it is due so the lectures apply to the homework you are currently working on.

Exams

Midterm Exams

There will be 2 in-class exams on October 2 and November 6. These will be 50 minute exams and will cover the material from the previous 5 weeks of class.
Final Exam

There will be a comprehensive final exam on December 16 at 3:30-6:30pm in Davis 101.

If you do well on the final exam, it will override 80% of your previous exam scores. Specifically, if you score better on the final exam than a midterm exam, your score for that midterm exam will become a weighted average of 80% of your final exam grade and 20% of your original midterm exam grade. Each of the midterm exams will be considered independently and this override will only be applied if it increases your grade.

Topics

Course topics will include, but are not limited to:

- C++ Introduction
- Iteration and Recursion
- Asymptotic Notation
- Iterators for Data Structures
- Data Structures (Sequential): Array, Vector, List, Stack, Queue
- Data Structures: Set, Map, Hash Table
- Data Structures (Tree-based): Tree, Heap, Priority Queue
- Data Structure: Graph

A more detailed schedule will be available on the class webpage.

Academic Integrity

All submitted work must be of your own creation. You are encouraged to discuss assignments with your classmates and search for relevant resources, but you must write your own code for each assignment. If any submission is very similar to code that has been submitted by another student or can be found online, it is in violation of this courses academic integrity policy.

Violations will be penalized as follows:
- First violation: A score of 0 for all parts of the corresponding assignment.
- Second violation: A grade of F in CSE250.

You are, however, allowed to use any code found in the course repository in your submissions. If you have any question whether something you are doing constitutes a violation or not, ask for clarification.

University/Department Policies and Services

Counseling: http://www.student-affairs.buffalo.edu/shs/ccenter/
Disabilities: http://www.student-affairs.buffalo.edu/ods/
Grading: http://undergrad-catalog.buffalo.edu/policies/grading/explanation.shtml
Academic Integrity: http://www.cse.buffalo.edu/undergrad/policy_academic.php